Abstract of the Disclosure

A position sensing device for determining the position of an object to which the position sensing device is attached is disclosed herein. The position sensing device may comprise a substrate, an actuator and a two-dimensional photosensor array wherein the substrate is attached to the object. The actuator may have a first portion and a second portion wherein the actuator first portion is attached to the substrate and wherein the actuator second portion is movably mounted to the actuator first portion along a first axis. The two-dimensional photosensor array may be attached to the actuator second portion. The position sensing device determines the position of the object by electronically and mechanically tracking distinct features on the surface. The electronic component of the tracking involves determining the position of the distinct features relative to the two-dimensional photosensor array. The mechanical component of the tracking involves moving the two-dimensional photosensor array to track the distinct features.